AMENDED IN ASSEMBLY APRIL 28, 2010

AMENDED IN ASSEMBLY APRIL 14, 2010

AMENDED IN ASSEMBLY APRIL 7, 2010

CALIFORNIA LEGISLATURE—2009–10 REGULAR SESSION

ASSEMBLY BILL No. 2514

Introduced by Assembly Member Skinner

February 19, 2010

An act ~~to amend Section 25302 of the Public Resources Code, and~~ to amend Sections 9615 and 9620 of, and to add Chapter 7.7 (commencing with Section 2835) to Part 2 of Division 1 of, the Public Utilities Code, relating to energy.

LEGISLATIVE COUNSEL'S DIGEST

AB 2514, as amended, Skinner. Energy storage systems.

Under existing law, the Public Utilities Commission (CPUC) has regulatory authority over public utilities, including electrical corporations, as defined. The existing Public Utilities Act requires the CPUC to review and adopt a procurement plan for each electrical corporation in accordance with specified elements, incentive mechanisms, and objectives. The existing California Renewables Portfolio Standard Program (RPS program) requires the CPUC to implement annual procurement targets for the procurement of eligible renewable energy resources, as defined, for all retail sellers, including electrical corporations, community choice aggregators, and electric service providers, but not including local publicly owned electric utilities, to achieve the targets and goals of the program.

The existing Warren-Alquist State Energy Resources Conservation and Development Act establishes the State Energy Resources

Conservation and Development Commission (Energy Commission) and requires it to undertake a continuing assessment of trends in the consumption of electricity and other forms of energy and to analyze the social, economic, and environmental consequences of those trends and to collect from electric utilities, gas utilities, and fuel producers and wholesalers and other sources, forecasts of future supplies and consumption of all forms of energy. ~~Existing law requires the Energy Commission, beginning November 1, 2003, and every 2 years thereafter, to adopt an integrated energy policy report which includes an assessment and forecast of system reliability and the need for resource additions, efficiency, and conservation.~~

Existing law requires that each local publicly owned electric utility serving end-use customers to prudently plan for and procure resources that are adequate to meet its planning reserve margin and peak demand and operating reserves, sufficient to provide reliable electric service to its customers. That law additionally requires the utility, upon request, to provide the Energy Commission with any information the Energy Commission determines is necessary to evaluate the progress made by the local publicly owned electric utility in meeting those planning requirements, and requires the Energy Commission to report the progress made by each utility to the Legislature, to be included in the integrated energy policy reports. Under existing law the governing body of a local publicly owned electric utility is responsible for implementing and enforcing a renewables portfolio standard for the utility that recognizes the intent of the Legislature to encourage renewable resources, while taking into consideration the effect of the standard on rates, reliability, and financial resources and the goal of environmental improvement.

This bill would require the CPUC, by April 1, 2011, to open a proceeding to establish procurement targets for each electrical corporation for viable and cost-effective energy storage systems and, by January 1, 2013, to adopt an appropriate energy storage system procurement target to be achieved by each electrical corporation by January 1, 2015, and a 2nd target to be achieved by January 1, 2020. The bill would require the governing board of a local publicly owned electric utility, by April 1, 2011, to open a proceeding to establish procurement targets for the utility for viable and cost-effective energy storage systems and, by January 1, 2013, to adopt an appropriate energy storage system procurement target to be achieved by the utility by January 1, 2015, and a 2nd target to be achieved by January 1, 2020. The bill would additionally require each local publicly owned electric

utility, commencing January 1, 2012, to develop and submit to the Energy Commission a plan to implement a 5-year program to employ distributed thermal, mechanical, or electrochemical energy storage systems to maximize shifting of electricity use for air-conditioning and refrigeration from peak demand periods to offpeak periods. The bill would require each electrical corporation and local publicly owned electric utility to report certain information to the CPUC, for an electrical corporation, or to the Energy Commission, for a local publicly owned electric utility. ~~The bill would require the Energy Commission to include certain information relative to energy storage systems in the integrated energy policy report, commencing with the report to be made by November 1, 2011.~~ The bill would make other technical, nonsubstantive revisions to existing law.

Under existing law, a violation of the Public Utilities Act or any order, decision, rule, direction, demand, or requirement of the CPUC is a crime.

Because certain of the provisions of this bill require action by the CPUC to implement, a violation of these provisions would impose a state-mandated local program by creating a new crime. Because certain of the bill's requirements are applicable to local publicly owned electric utilities, the bill would impose a state-mandated local program.

The California Constitution requires the state to reimburse local agencies and school districts for certain costs mandated by the state. Statutory provisions establish procedures for making that reimbursement.

This bill would provide that no reimbursement is required by this act for specified reasons.

Vote: majority. Appropriation: no. Fiscal committee: yes. State-mandated local program: yes.

The people of the State of California do enact as follows:

SECTION 1. The Legislature finds and declares all of the following:

(a) Expanding the use of energy storage systems can assist electrical corporations and local publicly owned electric utilities in integrating increased amounts of renewable energy resources into the electrical transmission and distribution grid in a manner that minimizes emissions of greenhouse gases.

(b) Additional energy storage systems can optimize the use of the significant additional amounts of variable, intermittent, and

offpeak electrical generation from wind and solar energy that will be entering the California power mix on an accelerated basis.

(c) Expanded use of energy storage systems can reduce costs to ratepayers by avoiding or deferring the need for new fossil fuel-powered peaking powerplants and avoiding or deferring distribution and transmission system upgrades and expansion of the grid.

(d) Expanded use of energy storage systems will reduce the use of electricity generated from fossil fuels to meet peak load requirements on days with high electricity demand and can avoid or reduce the use of electricity generated by high carbon-emitting electrical generating facilities during those high electricity demand periods. This will have substantial cobenefits from reduced emissions of criteria pollutants.

(e) Use of energy storage systems to provide the ancillary services otherwise provided by fossil-fueled generating facilities will reduce emissions of carbon dioxide and criteria pollutants.

(f) There are significant barriers to obtaining the benefits of energy storage systems, including inadequate evaluation of the use of energy storage to integrate renewable energy resources into the transmission and distribution grid through long-term electricity resource planning, lack of recognition of technological and marketplace advancements, and inadequate statutory and regulatory support.

~~SEC. 2. Section 25302 of the Public Resources Code is amended to read:~~

~~25302. (a) Beginning November 1, 2003, and every two years thereafter, the commission shall adopt an integrated energy policy report. This integrated report shall contain an overview of major energy trends and issues facing the state, including, but not limited to, supply, demand, pricing, reliability, efficiency, and impacts on public health and safety, the economy, resources, and the environment. Energy markets and systems shall be grouped and assessed in three subsidiary volumes:~~

~~(1) Electricity and natural gas markets.~~

~~(2) Transportation fuels, technologies, and infrastructure.~~

~~(3) Public interest energy strategies.~~

~~(b) The commission shall compile the integrated energy policy report prepared pursuant to subdivision (a) by consolidating the analyses and findings of the subsidiary volumes in paragraphs (1),~~

~~(2), and (3) of subdivision (a). The integrated energy policy report shall present policy recommendations based on an indepth and integrated analysis of the most current and pressing energy issues facing the state. The analyses supporting this integrated energy policy report shall explicitly address interfuel and intermarket effects to provide a more informed evaluation of potential tradeoffs when developing energy policy across different markets and systems.~~

~~(c) The integrated energy policy report shall include an assessment and forecast of system reliability and the need for resource additions, efficiency, and conservation that considers all aspects of energy industries and markets that are essential for the state economy, general welfare, public health and safety, energy diversity, and protection of the environment. This assessment shall be based on determinations made pursuant to this chapter.~~

~~(d) Beginning November 1, 2004, and every two years thereafter, the commission shall prepare an energy policy review to update analyses from the integrated energy policy report prepared pursuant to subdivisions (a), (b), and (c), or to raise energy issues that have emerged since the release of the integrated energy policy report. The commission may also periodically prepare and release technical analyses and assessments of energy issues and concerns to provide timely and relevant information for the Governor, the Legislature, market participants, and the public.~~

~~(e) (1) For purposes of this subdivision, "energy storage system" has the same meaning as in Section 2835.1 of the Public Utilities Code.~~

~~(2) Beginning November 1, 2011, and every two years thereafter, the integrated energy policy report, prepared by the commission pursuant to subdivision (a), shall do all of the following:~~

~~(A) Identify, evaluate, and recommend the best technologies and locations in the state for energy storage systems to achieve the purposes set forth in subdivision (a) of Section 2837.~~

~~(B) Evaluate the potential capacity and benefits of energy storage systems to the electrical transmission and distribution grid.~~

~~(C) Identify and recommend locations where the interconnection costs for energy storage systems located on the transmission and distribution grid would be minimized.~~

~~(f) In preparation of the report, the commission shall consult with the following entities: the Public Utilities Commission, the~~

~~Office of Ratepayer Advocates, the State Air Resources Board, the Electricity Oversight Board, the Independent System Operator, the Department of Water Resources, the California Consumer Power and Conservation Financing Authority, the Department of Transportation, and the Department of Motor Vehicles, and any federal, state, and local agencies it deems necessary in preparation of the integrated energy policy report. To assure collaborative development of state energy policies, these agencies shall make a good faith effort to provide data, assessment, and proposed recommendations for review by the commission.~~

~~(g) The commission shall provide the report to the Public Utilities Commission, the Office of Ratepayer Advocates, the State Air Resources Board, the Electricity Oversight Board, the Independent System Operator, the Department of Water Resources, the California Consumer Power and Conservation Financing Authority, and the Department of Transportation. For the purpose of ensuring consistency in the underlying information that forms the foundation of energy policies and decisions affecting the state, those entities shall carry out their energy-related duties and responsibilities based upon the information and analyses contained in the report. If an entity listed in this subdivision objects to information contained in the report, and has a reasonable basis for that objection, the entity shall not be required to consider that information in carrying out its energy-related duties.~~

~~(h) The commission shall make the report accessible to state, local, and federal entities and to the general public.~~

~~SEC. 3.~~

SEC. 2. Chapter 7.7 (commencing with Section 2835) is added to Part 2 of Division 1 of the Public Utilities Code, to read:

CHAPTER 7.7. ENERGY STORAGE SYSTEMS

2835. For purposes of this chapter, the following terms have the following meanings:

(a) (1) "Energy storage system" means commercially available technology that is capable of absorbing energy, storing it for a period of time, and thereafter dispatching the energy. An "energy storage system" may have any of the characteristics in paragraph (2), shall accomplish one of the purposes in paragraph (3), and shall meet at least one of the characteristics in paragraph (4).

(2) An "energy storage system" may have any of the following characteristics:

(A) Be either centralized or distributed.

(B) Be either owned by an electrical corporation or local publicly owned electric utility, a customer of an electrical corporation or local publicly owned electric utility, or a third party, or is jointly owned by two or more of the above.

(3) An "energy storage system" shall be cost effective and either reduce emissions of greenhouse gases, reduce demand for peak electrical generation, or improve the reliable operation of the electrical transmission or distribution grid.

(4) An "energy storage system" shall do one or more of the following:

(A) Use mechanical, chemical, or thermal processes to store energy that was generated at offpeak times for use at a later time without substantial reliance on fossil fuels.

(B) Store thermal energy for direct use for heating or cooling at a later time in a manner that avoids the need to use electricity at that later time.

(C) Use mechanical, chemical, or thermal processes to store energy generated from renewable resources for use at a later time without substantial reliance on fossil fuels.

(D) Use mechanical, chemical, or thermal processes to store energy generated from mechanical processes that would otherwise be wasted for delivery at a later time without substantial reliance on fossil fuels.

(b) "New" means, in reference to an energy storage system, a system that is installed and first becomes operational after January 1, 2010.

(c) "Offpeak" means, in reference to electrical demand, a period that is not within a peak demand period.

(d) "Peak demand period" means a period of high daily, weekly, or seasonal demand for electricity. For purposes of this chapter, the peak demand period for an electrical corporation shall be determined, or approved, by the commission and shall be determined, or approved, for a local publicly owned electric utility, by its governing body.

(e) "Procure" and "procurement" means, in reference to the procurement of an energy storage system, to acquire by ownership or by a contractual right to use the energy from, or the capacity

of, including ancillary services, an energy storage system owned by a customer or third party.

2836. (a) (1) On or before April 1, 2011, the commission shall open a proceeding to establish procurement targets for each electrical corporation for viable and cost-effective energy storage systems.

(2) On or before January 1, 2013, the commission shall adopt appropriate energy storage system procurement targets to be achieved by each electrical corporation by January 1, 2015, and a second target to be achieved by January 1, 2020.

(3) The commission shall reevaluate the determinations made pursuant to this subdivision not less than once every three years.

(b) (1) On or before April 1, 2011, the governing board of each local publicly owned electric utility shall initiate a process to establish procurement targets for the utility for viable and cost-effective energy storage systems.

(2) On or before January 1, 2013, the governing board shall adopt appropriate energy storage system procurement targets to be achieved by the utility by January 1, 2015, and a second target to be achieved by January 1, 2020.

(3) The governing board shall reevaluate the determinations made pursuant to this subdivision not less than once every three years.

(4) A local publicly owned electric utility shall report to the Energy Commission regarding the energy storage system procurement targets adopted by the governing board pursuant to paragraph (2), and report any modifications made to those targets as a result of a reevaluation undertaken pursuant to paragraph (3).

2836.2. In adopting and reevaluating appropriate energy storage system procurement targets pursuant to subdivision (a) of Section 2836, the commission shall do all of the following:

(a) Consider existing results of testing and trial pilot projects from existing energy storage facilities.

(b) Consider available information from the California Independent System Operator derived from California Independent System Operator testing and evaluation procedures.

(c) Consider the integration of energy storage technologies with other programs, including energy efficiency or other means of reducing electrical demand that will result in the most efficient

use of generation resources and cost-effective energy efficient grid integration and management.

(d) Ensure that the energy storage system procurement targets that are established are technologically viable and cost effective.

2836.4. (a) An energy storage system shall be used to meet the resource adequacy requirements established for an electrical corporation pursuant to Section 380 if it meets applicable standards.

(b) An energy storage system shall be used to meet the resource adequacy requirements established by a local publicly owned electric utility pursuant to Section 9620 if it meets applicable standards.

2836.6. All procurement of energy storage systems by an electrical corporation or local publicly owned electric utility shall be cost effective.

2837. Each electrical corporation's renewable energy procurement plan, prepared and approved pursuant to Article 16 (commencing with Section 399.11) of Chapter 2.3 of Part 1, shall do all of the following:

(a) Require the utility to procure new energy storage systems that are sufficient to allow the electrical corporation to meet the energy storage system procurement targets adopted pursuant to Section 2836. The plan shall address the acquisition and use of energy storage systems in order to achieve the following purposes:

(1) Integrate intermittent generation from eligible renewable energy resources into the reliable operation of the transmission and distribution grid.

(2) Allow intermittent generation from eligible renewable energy resources to operate at or near full capacity.

(3) Eliminate the need for new fossil-fuel powered peaking generation facilities by using stored electricity to meet peak demand.

(4) Reduce purchases of electricity generation sources with higher emissions of greenhouse gases.

(5) Eliminate or reduce transmission and distribution losses, including increased losses during periods of congestion on the grid.

(6) Reduce the demand for electricity during peak periods and achieve permanent load-shifting by using thermal storage to meet air-conditioning needs.

(7) Avoid or defer investments in transmission and distribution system upgrades.

(8) Use energy storage systems to provide the ancillary services otherwise provided by fossil-fueled generating facilities.

(b) Consider and incorporate, where feasible, the Energy Commission's evaluation of energy storage systems, including locations where the interconnection costs for energy storage systems located on the transmission and distribution grid would be minimized, as identified in the Integrated Energy Policy Report prepared pursuant to Section 25302 of the Public Resources Code.

2838. (a) (1) By January 1, 2015, each electrical corporation shall submit a report to the commission demonstrating that it has complied with the energy storage system procurement targets adopted by the commission pursuant to subdivision (a) of Section 2836.

(2) By January 1, 2020, each electrical corporation shall submit a report to the commission demonstrating that it has complied with the energy storage system procurement targets adopted by the commission pursuant to subdivision (a) of Section 2836.

(b) The commission shall ensure that a copy of each report required by subdivision (a), with any confidential information redacted, is available on the commission's Internet Web site.

2839. (a) (1) By January 1, 2015, a local publicly owned electric utility shall submit a report to the Energy Commission demonstrating that it has complied with the energy storage system procurement targets adopted by the governing board pursuant to subdivision (b) of Section 2836.

(2) By January 1, 2020, a local publicly owned electric utility shall submit a report to the Energy Commission demonstrating that it has complied with the energy storage system procurement targets adopted by the governing board pursuant to subdivision (b) of Section 2836.

(b) (1) Within 60 days of receipt of a report required by subdivision (a), the Energy Commission shall notify a local publicly owned electric utility if the report fails to demonstrate compliance with the energy storage system procurement target requirements.

(2) Within 60 days of receiving a notice of deficiency pursuant to paragraph (1), a local publicly owned electric utility shall submit an energy storage system procurement compliance plan to the

Energy Commission setting forth a program for compliance with the energy storage system procurement targets within six months of the required date for submittal of the compliance plan.

(3) The local publicly owned electric utility that submitted an energy storage system procurement compliance plan shall comply with the applicable energy storage system procurement targets within six months from the required date for submittal of the compliance plan and shall submit proof of compliance to the Energy Commission within 30 days of the expiration of the six-month period.

(c) The Energy Commission shall ensure that a copy of each report or plan required by subdivisions (a) and (b), with any confidential information redacted, is available on the Energy Commission's Internet Web site, or on an Internet Web site maintained by the local publicly owned electric utility that can be accessed from the Energy Commission's Internet Web site.

(d) On or before July 1, 2011, the Energy Commission shall adopt regulations specifying procedures to enable local publicly owned electric utilities to comply with this chapter.

(e) The commission does not have authority or jurisdiction to enforce any of the requirements of this chapter against a local publicly owned electric utility.

~~SEC. 4.~~

SEC. 3. Section 9615 of the Public Utilities Code is amended to read:

9615. (a) Each local publicly owned electric utility, in procuring energy to serve the load of its retail end-use customers, shall first acquire all available energy efficiency and demand reduction resources that are cost effective, reliable, and feasible.

(b) On or before June 1, 2007, and by June 1 of every third year thereafter, each local publicly owned electric utility shall identify all potentially achievable cost-effective electricity efficiency savings and shall establish annual targets for energy efficiency savings and demand reduction for the next 10-year period. A local publicly owned electric utility's determination of potentially achievable cost-effective electricity efficiency savings shall be made without regard to previous minimum investments undertaken pursuant to Section 385. A local publicly owned electric utility shall treat investments made to achieve energy efficiency savings and demand reduction targets as procurement investments.

(c) Within 60 days of adopting annual targets pursuant to subdivision (b), each local publicly owned electric utility shall report those targets to the Energy Commission, and the basis for establishing those targets.

(d) Each local publicly owned electric utility shall report annually to its customers and to the Energy Commission. The report shall contain, but is not limited to, both of the following:

(1) Its investments in energy efficiency and demand reduction programs.

(2) A description of programs, expenditures, cost-effectiveness, and expected and actual energy efficiency savings and demand reduction results.

(e) Each local publicly owned electric utility shall also annually develop and submit to the Energy Commission a report containing all of the following:

(1) The sources of funding for its investments in energy efficiency and demand reduction program investments.

(2) The methodologies and input assumptions used to determine cost-effectiveness.

(3) The results of an independent evaluation that measures and verifies the energy efficiency savings and reduction in energy demand achieved by its energy efficiency and demand reduction programs.

(f) (1) Each local publicly owned electric utility, by January 1, 2011, shall develop and submit to the Energy Commission a plan setting forth a program, to be implemented over the following five years, requiring the use of distributed thermal, mechanical, or electrochemical energy storage systems to maximize shifting of electricity use for air-conditioning and refrigeration from peak demand periods to offpeak times. The purposes of the program shall include reducing electricity demand during peak demand periods and reducing emissions of greenhouse gases, oxides of nitrogen, and particulate matter.

(2) In developing and implementing the plan required by this subdivision, each of the attributes that an energy storage system would provide, shall be considered and valued when determining if a proposed energy storage system is cost effective.

(3) Each local publicly owned electric utility, within one year of its issuance, shall consider and, where feasible, incorporate into the utility's plan required by this subdivision, the Energy

Commission's evaluation of energy storage locations, technologies, and benefits as identified in the most current Integrated Energy Policy Report prepared pursuant to Section 25302 of the Public Resources Code.

(g) The Energy Commission shall include a summary of the information reported pursuant to subdivision (e) in the integrated energy policy report prepared pursuant to Chapter 4 (commencing with Section 25300) of Division 15 of the Public Resources Code. The Energy Commission shall also include, for each local publicly owned electric utility, a comparison of the local publicly owned electric utility's annual targets established in accordance with this section, and the local publicly owned electric utility's actual energy efficiency savings and demand reductions. If the Energy Commission determines that improvements can be made in either the level of a local publicly owned electric utility's annual targets to achieve all cost-effective, reliable, and feasible energy savings and demand reductions and to enable the local publicly owned electric utilities, in the aggregate, to achieve statewide targets established pursuant to Section 25310, or in meeting each local publicly owned electric utility's annual targets, the Energy Commission shall provide recommendations to the local publicly owned electric utility, the Legislature, and the Governor on those improvements.

~~SEC. 5.~~

SEC. 4. Section 9620 of the Public Utilities Code is amended to read:

9620. (a) Each local publicly owned electric utility serving end-use customers, shall prudently plan for and procure resources that are adequate to meet its planning reserve margin and peak demand and operating reserves, sufficient to provide reliable electric service to its customers. Customer generation located on the customer's site or providing electric service through arrangements authorized by Section 218, shall not be subject to these requirements if the customer generation, or the load it serves, meets one of the following criteria:

(1) It takes standby service from the local publicly owned electric utility on a rate schedule that provides for adequate backup planning and operating reserves for the standby customer class.

(2) It is not physically interconnected to the electric transmission or distribution grid, so that, if the customer generation fails, backup power is not supplied from the electricity grid.

(3) There is physical assurance that the load served by the customer generation will be curtailed concurrently and commensurately with an outage of the customer generation.

(b) Each local publicly owned electric utility serving end-use customers shall, at a minimum, meet the most recent minimum planning reserve and reliability criteria approved by the Board of Trustees of the Western Systems Coordinating Council or the Western Electricity Coordinating Council.

(c) Each local publicly owned electric utility shall prudently plan for and procure energy storage systems that are adequate to meet the requirements of Section 2836.

(d) A local publicly owned electric utility serving end-use customers shall, upon request, provide the Energy Commission with any information the Energy Commission determines is necessary to evaluate the progress made by the local publicly owned electric utility in meeting the requirements of this section.

(e) The Energy Commission shall report to the Legislature, to be included in each integrated energy policy report prepared pursuant to Section 25302 of the Public Resources Code, regarding the progress made by each local publicly owned electric utility serving end-use customers in meeting the requirements of this section.

~~SEC. 6.~~

SEC. 5. No reimbursement is required by this act pursuant to Section 6 of Article XIII B of the California Constitution because a local agency or school district has the authority to levy service charges, fees, or assessments sufficient to pay for the program or level of service mandated by this act or because costs that may be incurred by a local agency or school district will be incurred because this act creates a new crime or infraction, eliminates a crime or infraction, or changes the penalty for a crime or infraction, within the meaning of Section 17556 of the Government Code, or changes the definition of a crime within the meaning of Section 6 of Article XIII B of the California Constitution.

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